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ABSTRACT

Meaningful stress management efforts should include analysis of both organizational and individual factors. Results of a June 1982 survey of 130 teachers in 4 Buffalo (New York) school district elementary schools indicate that feelings of organizationally based stress did not vary significantly according to such demographic variables as sex or age. Of stress factors unique to educational systems, lack of materials, student motivation, and discipline problems ranked highest. Stress manifestations were primarily emotional rather than behavioral or physical. Urban teachers reported more than average stress levels, but not the high stress levels that might have been expected, especially for that time of the year. Clear relations were revealed between organizational variables, such as work relationships and career development, and individual stress manifestations. Classroom-based issues, however, proved more stressful than organizationally based issues. Because urban teachers reported only moderate stress levels, teacher stress management programs might best be developed on a selective basis. The consistency of the findings across the four school sites suggests that the person-environment fit model used is applicable to other settings. (JBM)

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# ORGANIZATIONALLY-BASED STRESS: WHAT BOTHERS TEACHERS
## (An End of Year Perspective)

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Paper presented at the Annual meeting of The American Educational Research Association, April, 1983, Montreal, Quebec, Canada

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Stress management is rapidly becoming a major concern for school district leaders. Many find themselves having to cope with increasing levels of stress manifestation being exhibited by teachers and administrators. In part, at least, this is due to a lack of clarity about underlying causes of teacher stress. Too frequently we observe the manifestations of stress (e.g., physical exhaustion, over-eating, drug or alcoholic abuse, mental fatigue, and excessive absenteeism) and conclude that remediation prescriptions should focus on self-improvement. That is, individual efforts, such as improved eating habits, more sleep and physical conditioning will help individuals become stronger and, thus, improve their ability to cope with stress.

This view is only partially correct because it does not account for the individual's environment, which can also cause individuals to feel stressed. When our environment is stable, most of us can devise means of coping with it. However, when environments change rapidly, as is the case today, even the

healthiest among us find it difficult to maintain a low level of stress.

One of our most meaningful environments is the organization in which we work; the place in which we spend many of our waking hours. It follows that meaningful stress management efforts should include the organization as well as the individual in their frame of reference.

The organizations of interest in the present case are public schools. In this paper we report data collected in four elementary schools in the Buffalo, New York School District. The data were collected during June of 1982, a time of the year when one would expect stress to be particularly high, due to the many tasks that must be completed before the end of the school term.* After development of framework for treating the data and presentation of the methods employed, we will summarize the data and draw implications for research and practice.

## Concepts and Categories

Stress occurs when there is "a perceived excess of environmental demands over an individual's perceived capability to meet them and when failure to meet these demands has important perceived consequences" (McGrath, 1970). Implicit in this three part definition (environmental demands, capacity to meet them, and consequences if they are not met) is the assumption that stress occurs if there is a lack of fit between environmental press and individuals' capacities (e.g., skills, aptitudes and beliefs about the situation) to respond to that press.

French and Caplan (1972) formalized the "fit" notion with their discussion

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*Cf., Hembling and Gilliland, (1981), whose research, focusing on cycles of stress over the school year, found that teachers reported levels of stress during the last few weeks of the school year that far exceeded the levels of stress they felt at any other time of the year.

of person and environment interactions, or P:E Fit. Their research led them to conclude that stress is directly related to the fit between an individual's ability to cope and the environmental conditions, particularly the work environment, under which that person must function.

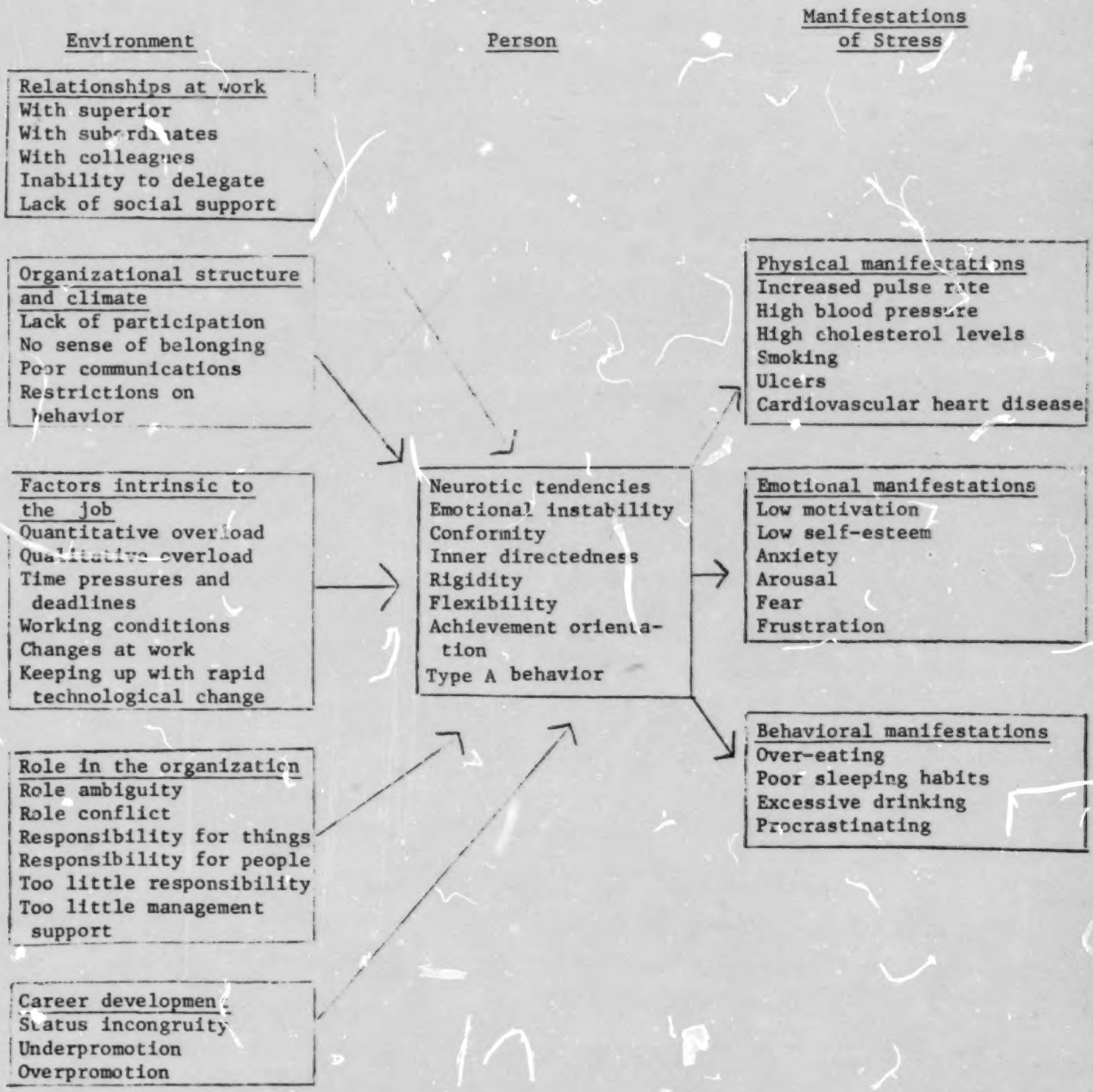
A number of researchers have attempted to isolate categories of organizationally-based stress that might affect workers' levels of efficiency, effectiveness and satisfaction (cf., Chernis, 1980; Cooper and Marshall, 1978; French and Caplan, 1972; Frew, 1977; Ivancevich and Matteson, 1980). The categories identified vary, but all are based on the assumption that there are ongoing and identifiable sources of stress in the organizational environment. Understanding what these sources are and how they might lead to stress can help us to develop more adequate stress management strategies.

The categorical scheme developed by Cooper and Marshall (1978) employs the French and Caplan's P:E Fit. This scheme includes three elements—the environment, the person, and manifestations of stress (see Figure I). We have modified the framework to fit our research needs. Specifically, on the environment side we have dropped one category, extra-organizational sources. The five remaining categories are organizationally-based and can be summarized as follows:

1. Relationships at Work: The extent and tenor of adult interactions on the job. Included are interactions with superiors, peers and subordinates. There is a direct relationship between the extent of trust demonstrated in the relationships among organizational members and members' feelings of job satisfaction and well-being.

2. Organizational Structure and Climate: Stress-related issues in this category include the extent to which there is members' participation in decision making; whether members have a sense of belonging; whether supervision is supportive and effective; whether there is clear and sufficient communications; and whether limitations are placed on the behavior of organizational members.

Figure I: The P-E Fit Framework
Elements Found to be Associated with Stress




(Modified from Cooper and Marshall, 1978, pp. 56-57)

3. Factors Intrinsic to the Job: Every occupation has built-in working conditions. These include the extent, type, and pace of work; the physical effort required; the total number of hours involved and the specific hours of the day or night spent at the work place; the extent to which activities are regularized and repetitive; and physical environment factors, such as space, lighting, noise levels, and availability of private space.

4. Role in the Organization: Several role-related factors can be stress-inducing: role ambiguity (i.e., confusion about the scope or specific responsibilities of the job); role conflict (i.e., being pulled in different directions by incompatible demands; roles which are high in responsibility for people; and the perception of a minimal sense of authority in one's organizational role.

5. Career Development: Career progression, including status, and opportunity for advancement is important to organizational members. Lack of job security and perception of low probability of reward can lead to manifestations of stress.

Two modifications were made regarding the original stress manifestations component of the Cooper and Marshall typology. Specifically, because we are interested in individual manifestations of stress we did not analyze organizational manifestations, which were included in the original framework. In addition, their mental health category was divided into two categories--emotional and behavioral manifestations to obtain more discrete results. The three categories as modified, can be described as follows:

1. Emotional Manifestations: Stressful events can lead to an undesirable emotional or feeling state. Used strictly in the negative sense intended here, such feelings vary from undefined anxiety, dissatisfaction and arousal, to reactions of fear and frustration.

2. Behavioral Manifestations: Humans respond to arousal, either consciously or unconsciously, in order to cope with the environment. Most such behaviors are considered quite normal, but in extreme cases stress can lead to such behaviors as over-eating or an inability to sleep restfully.

3. Physical Manifestations: The end product of chronic stress arousal and subsequent behavioral responses can result in overt physical changes. For example, constant muscular tension and elevated metabolic rates result in depleted energy reserves and, ultimately, to a sense of fatigue.

The P:E Fit framework depicted in Figure I includes five environmental categories that exist within any organization. These are encountered by individuals who will exhibit manifestations of distress if they are unable to cope with them. The level and types of stress actually observed will vary depending upon organizational type, the specific organization in question and the individual's ability (personality, experience, etc.) to cope.

The purposes of the study are to establish the level of respondent teachers' perceived stress, which organizationally-based factors are most stress inducing, and the predominant ways in which teachers manifest felt-stress.

## Methods

The Buffalo Public School District is a large urban school system serving 47,572 students, 53.4 percent of whom are minority group students. The district employs 3,399 teachers, and includes fifty elementary schools, fifteen middle and high schools, and twenty-two special schools (e.g., academies, handicapped, bilingual).

In the Spring of 1982, the administration of the district was approached concerning the possibility of cooperating as an action-research site for a multi-phasic stress intervention program. After agreement was reached with the administration and teacher association leaders, all principals of the city's elementary schools (K-8) were surveyed for possible involvement. Nine principals agreed to offer their schools as action-research sites. Ultimately, four schools were selected for use by the research team based upon compatibility of demographic variables (e.g., enrollment, racial composition, and years of principals' experience in the building). (See Table I.)

Table I

Descriptive Analysis of the Four School Sites Included in the Research

| Category | Schools | | | |
|---|---|---|---|---|
| | A | B | C | D |
| Student Population | 530 | 840 | 470 | 560 |
| Full-Time Faculty | 25 | 33 | 30 | 30 |
| Percentage Minority Students | 60 | 60 | 52 | 58 |
| School Type | K-8 | K-8 | K-8 | K-8 |
| Administrative Structure | Traditional | Traditional | Traditional | Traditional |
| Principals' Years of Experience in the School | 10 | 12 | 10 | 10 |
| Socio-Economic Distribution of Students | Lower | Mixed | Lower/ Lower Middle | Lower |
| School Attendance Boundaries | Neighborhood/ City Wide | City Wide | Neighborhood/ City Wide | Neighborhood |

The selected schools were visited during the last week of the 1981-82 school year, at which time the staffs of all four schools agreed to participate. Findings of the study are limited to the participating schools in this district, but the school system is much like other large urban districts confronted with racial problems, declining enrollments, aging faculties, political pressures and budgetary limitations.

Instrumentation

The instrument employed, "Stress in Schools," is a two-part Likert scale containing eight demographic items, followed by thirty-five organizational

stress items in Section I, and twenty individual health manifestation items in Section II. Section I is an adaptation of an instrument used by Ivancevich and Matteson (1980). Section II, individual health manifestation, was taken from the instrument developed by Fimian (1982). Both instruments have demonstrated acceptable levels of reliability and content validity. Slight modifications of these instruments were undertaken and several school-specific items were added to Section I to enhance specificity to this research. Further validity and reliability testing is being conducted, with preliminary results appearing favorable.

Data Collection and Analysis

The instrument was administered to all four participating faculties during June of 1982. A total of 130 teachers out of the population of 134 completed the survey instrument. The data were then processed and analyzed as follows. The means and standard deviations for both Sections I and II were calculated to identify and rank-order specific stressors and personal manifestations. The survey data were then collapsed into the categories of like constructs identified by Ivancevich and Matteson in their instrument and collective means for each category were obtained. A second collapsing of data, this time by the organizational elements suggested by Cooper and Marshall, was then undertaken. An ANOVA test was performed by categories to contrast the compatability of all four sites. A second ANOVA was performed, contrasting responses with demographic variables to determine if such factors as age, sex, and education, effect stress perceptions. Finally, Pearson correlations were undertaken to contrast organizational variables with personal manifestations to determine

whether relationships exist between them.

## Results

The results of the June, 1982 survey are reported in seven sections: extent of teacher stress; teacher stress by organizationally-based categories and sub-categories; across-schools variations; demographic variations; organizationally-based stressors unique to education; individual manifestations of felt-stress; and relationships between organizational factors and individual manifestations of felt-stress.

### Extent of Teacher Stress

Participants were asked to indicate how stressful they feel their job to be. Along a five-point scale ranging from very little to very much, the mean response was 3.35, with an across-school range of 3.20 to 3.62. Both the mean and the range are of interest. The mean indicates that these urban elementary teachers do indeed feel the impact of stress, but not as extensively as many anecdotally-based articles in the educational literature would indicate (cf., Grossnickle, 1980; Moe, 1979; and Sylwester, 1977). The 4/10ths of a point range lends support to the argument that the specific organization in which one works has a direct effect upon how stressed one feels. It should also be noted that the general felt-stress question, when correlated with the categorical questions, which tested for specific organizational stressors, showed significance at the .05 level with 29 of the 36 questions in the instrument. In other words, respondents were able to translate their general felt-level of stress into stress eminating from organizationally-based factors.

### Teacher Stress by Organizationally-Based Categories and Sub-Categories

Respondents were asked to indicate the frequency ranging from never

(scored 1) to always (scored 7), specific organizationally-based conditions might be sources of stress to them. All but three of the thirty-five conditions included on the questionnaire are found in most any work setting, and can be categorized according to the Cooper and Marshall framework.* Table II displays the mean stress scores for the total population, ranking organizationally-based categories, from highest to lowest as stressors.

Table II

Organizationally-Based Stressor Categories

| Rank as Stress Factor | Category | Mean* |
|---|---|---|
| 1 | Career Development | 3.083 |
| 2 | Organizational Structure and Climate | 3.004 |
| 3 | Relationships at Work | 2.992 |
| 4 | Factors Intrinsic to the Job | 2.860 |
| 5 | Role in the Organization | 2.771 |

*Mean scores are based on a scale ranging from 1 (never) to 7 (always)

Several conclusions can be derived from Table II. First, the level of felt-stress from the five organizationally-based categories is relatively low. Not one category even approached the 4.0 mid-point of the scale (although more discrete analysis showed some higher scores within the individual schools

* The other three—discipline, student motivation, and classroom materials, are unique to education and will be discussed in a subsequent section of the paper.

and for some sub-categories). Second, teachers were able to discriminate among organizationally-based stress categories. That is, some categories are more stress-inducing than others. More specifically, a sense of career stall, unsatisfactory relationships and poor organizational structure and climate were rated marginally-higher as stressors than were factors intrinsic to the job and role factors. Regarding the lowest ranked categories teachers in the survey seem to have a clear understanding of their and others' expectations for their roles, and they have accepted the conditions under which they work. That teachers reported role related factors as the least stressful aspect of their jobs is worth noting, particularly in light of the fact that a number of studies have associated high levels of role ambiguity and role conflict with high levels of felt-stress. (cf., French and Caplan, 1970; Cobb, 1974; House and Rizzo, 1972; Miles and Perrault, 1976; and Katz and Kahn, 1978).

Sub-Categories. Each of the five categories was composed of two or more sub-categories. As noted in Table III, there were wider variations found at the sub-category level.

Table III

Organizationally-Based Stressors by Sub-Categories

| Category | Sub-Categories | Mean* |
|---|---|---|
| Career Development | Salary | 4.339 |
| | Career Progress | 2.667 |
| Organizational Structure and Climate | Climate | 3.033 |
| | Structure | 2.980 |
| Relationships at Work | Lack of Cohesiveness | 3.373 |
| | Leader Influence | 3.008 |
| | Group Support | 2.727 |
| Factors Intrinsic to the Job | Quantitative Work Overload | 3.351 |
| | Qualitative Work Overload | 2.395 |
| Role in the Organization | Responsibility for People | 3.174 |
| | Role Conflict | 3.018 |
| | Control over Activities | 2.468 |
| | Role Ambiguity | 2.194 |

*Mean scores are based on a scale ranging from 1 (never) to 7 (always)

One sub-category, salary, stands out (at 4.339). That salaries are viewed by teachers as inadequate is not surprising, but the fact that respondents viewed this issue as the most stressful aspect of their job, is important. Given the economic constraints under which most school districts operate, it is unlikely that much can be done to appreciably improve the level of compensation teachers receive.

Other sub-categories that ranked relatively high as stressors include lack of cohesiveness among teachers (3.373) and quantitative work overload (3.351). In other words, these teachers are dissatisfied with their peer relationships and are feeling burdened by the extent of work that must be performed at and away from the work-site to do their jobs.

One very low sub-category stressor was role ambiguity (2.194). Despite widespread debate over the role of education in our society, responding teachers indicated that they understand their responsibilities and have sufficient latitude to carry them out. When their role does cause them stress, it is more because of role conflict (3.010) (i.e., where some people accept what they do, but others don't; or where they receive conflicting requests from two or more people).

Across-Schools Variations

The data were examined at the sub-category level across the four schools to establish whether potential stressors were commonly experienced. ANOVA F test results show that across-school comparisons of sub-categories showed none to be significant at the .05 level. In other words, it cannot be stated that the organizationally-based sub-categories employed in the study had

differential impacts across the four school sites. In fact, for nine of the thirteen sub-categories, the score ranges across-sites were less than half-a-point on the response scale. That no significance was found for any of the sub-categories and that so many sub-categories showed such great consistency across the four school sites lends support to the generalizability of the conclusions derived.

However, there were score ranges on four of the sub-categories that are worth reporting because they were somewhat larger than those of the other nine. (See Table IV.)

Table IV

Sub-Categories that Differed Across School-Sites (by half-a-point or greater)*

| Sub-Categories | Range | School A | School B | School C | School D |
|---|---|---|---|---|---|
| Leader Influence | 1.061 | 2.417(low) | 3.117 | 3.478(high) | 2.857 |
| Lack of Cohesiveness | .878 | 2.789(low) | 3.553 | 3.667(high) | 3.250 |
| Quantitative Overload | .774 | 3.019(low) | 3.[illegible]7 | 3.793(high) | 3.[illegible]86 |
| Organizational Structure | .545 | 3.056 | 2.830(low) | 3.375(high) | 2.871 |

*Mean scores are based on a scale ranging from 1 (never) to 7 (always)

Because variations did appear, even though not at the .05 level, it may be important to give consideration to site-specific organizationally-based stress. In the present study, negative stress-related effects of

leadership influence, lack of group cohesiveness, quantitative overload and organizational structure shortcomings did show some variance across sites. It is also worth noting that there is a distinct pattern to the variations. School A is lowest in three of four sub-categories and School C is highest in all four categories. Perceptions of stress, in short, might be influenced somewhat by the worksite.

Demographic Variations

Demographic factors included in the study were gender, age, length of teaching generally and in the school specifically, educational attainment, and grade-level taught. When correlated against the five potentially stressful organizational categories, none of these demographic factors was significant at the .05 level. Nor were significant differences found at the sub-category level. In short, the extent to which organizationally-based stress was felt by respondents did not appear to be greatly affected by their sex, age, experience, or teaching focus. At the level of specific survey items, however, several significant differences did appear when demographic factors were tested. These include:

1. Females were more stressed than males about the belief that their students were not doing as well as they could because they were not trying hard enough;
2. Pre-school and kindergarten teachers were less stressed about the student effort issue than teachers of any other grade level while third and fourth grade teachers were most stressed about this issue, and,
3. Quantitative work overload was most stressful to teachers who reported

averaging nine or more hours of job-related work per day.

It is difficult to impute causation for these significant differences, but common sense hunches can be posited. Females tend to be more nurturing, and may be most negatively effected if they feel their students are not succeeding; pre-school and kindergarten teachers focus their efforts on socialization, while third and fourth grade teachers focus their efforts on basic reading, writing, and mathematics skill development, so the latter group of teachers feel the press for achievement most greatly; and it stands to reason that those putting in the most effort feel most overburdened.

Organizationally-Based Stressors Unique to Education

The findings presented thus far depict a respondent group that has a relatively low stress profile. However, these findings are based upon general organizationally-based stress-related categories. Three questionnaire items were included that focused on organizationally-based factors that are unique to educational sy[illegible]. (See Table V.)

Table V

Organizationally-Based Factors Unique to Education*

| Factor Associated with Stress | Mean Score |
|---|---|
| Students would probably do better if they tried harder | 4.584 |
| Materials, equipment, and facilities to do my job are insufficient | 4.544 |
| Frustration because of discipline problems in the classroom | 3.887 |
| Having responsibility for the future of students | 3.856 |

*Mean scores are based on a scale ranging from 1 (never) to 7 (always)

A review of Table V shows that these urban elementary school teachers are most stressed about factors that relate to their core function; i.e., the delivery of instructional services to children. Lack of materials to do the job (4.544); insufficient student motivation (4.584); and discipline problems (3.987) ranked among the highest sources of stress for respondents. It also is logical that they will be stressed because they feel responsible for the future of their students (3.856) if they think their students act out in class and do not try hard enough to achieve.

In short, teachers in the study appeared to be concerned that they might not be able to meet their professional obligations. Under such conditions, the core functions of teaching understandably takes precedence, as a stress producing base, over what teachers might view as activities that are peripheral to their roles; i.e., organization-wide stress-related categories that do not appear to have an immediate effect on their classroom activities.

Individual Manifestations of Felt-Stress

Perhaps the most significant element of the interrelationship depicted in Figure I is the uniqueness of the person. The often quoted stress definition of Selye, "the non-specific response of the body to any demand made upon it," (Selye, 1956) implies that stress can originate from social, psychological and biological origins. In the present case, we are concerned with organizational stress sources. The key to the model is in the individual's perception or interpretation of those sources. The subsequent manifestations of stress, either benign or acute, are individually defined by previous learning experiences and related personality characteristics.

Although individuals vary in their responses,**groups can be examined and judgments can be made about their collective, or central, tendencies. Table VI presents the means of the three stress manifestation categories. As in the organizational sections, teachers did not report high responses. In fact, the survey midpoint of 2.5 was not reached by two of the three categories or at the total mean score. There were differences, however, with emotional manifestations clearly leading all other categories.

Table VI

Means of Stress Manifestations by Sub-Categories*

| Category | Mean Score |
|---|---|
| Emotional Manifestations | 2.721 |
| Behavioral Manifestations | 1.805 |
| Physical Manifestations | 2.106 |
| Total Across Categories | 2.179 |

*Mean scores are based on a scale ranging from 1 (no strength, not noticeable) to 5 (major strength, extremely noticeable)

Table VII examines specific questions by rank order, identifying those items greater than the scale's midpoint. Of twenty items, only six scored above the mean with feeling anxious ranking first, followed, in order, by physical exhaustion, feeling depressed and becoming fatigued. The latter

**Discussions in the paper focus on central tendencies (means) of the observed results. However, it should be noted that all items in both organizationally-based and stress manifestation categories showed responses ranging to both extremes of the scale. Therefore, although overall mean-levels of stress were relatively low, some individuals reported high levels of felt-stress.

three are of interest since they may be characteristic of incipient illness. The fact that the majority of teachers report these manifestations above the survey midpoint is important to note. In indicates that teachers may well be experiencing symptomatic conditions of disease states. The research did not evaluate this dimension and further study in this area is strongly suggested.

Table VII

The Highest Single Manifestation of Stress*

| Rank | Item | M |
|---|---|---|
| 1 | Feeling Anxious | 3.208 |
| 2 | Physical Exhaustion | 3.203 |
| 3 | Feeling Depressed | 2.919 |
| 4 | Becoming Fatigued in a Very Short Time | 2.798 |
| 5 | Sleeping More Than Usual | 2.587 |
| 6 | Feeling Vulnerable | 2.537 |

*Mean scores are based on a scale ranging from 1 (no strength, not noticeable) to 5 (major strength, extremely noticeable)

Relationships of Organizationally-Based Stress and Individual Manifestations of Felt-Stress

Of further interest is the relationship of organizationally-based stressors to individual manifestations of stress. Table VIII presents correlations between the organizational variables included in the survey and the stress manifestations of respondents. Of sixty-four potential relationships, all were positive, and all but four were statistically significant

at the .05 level.

Table VIII

A Correlation Matrix of Organizational Categories and Personal Health Manifestations*

| | Health Manifestation | | | |
|---|---|---|---|---|
| Organizational Variable | Emotional | Behavioral | Physical | Total |
| Career Development | .39 | .34 | .16 | .32 |
| Responsibility for Others | .36 | .38 | .27 | .42 |
| Organizational Climate | .41 | .29 | .23 | .40 |
| Organizational Structure | .43 | .19 | .23 | .38 |
| Lack of Cohesiveness | .42 | .21 | .22 | .35 |
| Group Support | .35 | .15* | .23 | .30 |
| Role Ambiguity | .47 | .28 | .33 | .46 |
| Role Conflict | .38 | .19 | .20 | .33 |
| Work Overload - Quantity | .43 | .25 | .23 | .38 |
| Work Overload - Quality | .49 | .40 | .33 | .51 |
| Control Over Role Activities | .38 | .31 | .17 | .35 |
| Student Motivation | .21 | .05* | .001* | .10* |
| Salary Inadequacy | .26 | .10 | .22 | .26 |
| Discipline | .34 | .23 | .38 | .42 |
| Resource Adequacy | .29 | .12* | .27 | .31 |
| Leadership Influence | .38 | .23 | .27 | .38 |
| Total | .53 | .36 | .38 | .51 |

*Correlations Not Significant at the .05 Level or Less

Emotional manifestations exhibited the strongest correlations. Total organizational variables ranked highest in correlations at .53 with emotional manifestations followed closely by qualitative work overload (.49), role ambiguity (.47) and quantitative work overload (.43).

By examining Table IX, when collapsing the organizational categories into the elements proposed by Cooper and Marshall, relationships showed even greater strength. Of twenty potential relationships, all were significant; nineteen at the .01 level, and one at the .05 level. As might be expected emotional manifestations again clearly showed the highest correlation, with factors intrinsic to the job rating the highest, at .50.

Table IX

A Correlation Matrix of Organizational Domains and Personal Health Manifestations

| | Health Manifestation | | | |
|---|---|---|---|---|
| Organizational Domain | Emotional | Behavioral | Physical | Total |
| Role Relationships | .44 | .21* | .27 | .39 |
| Structural Climate | .44 | .26 | .25 | .41 |
| Factors Intrinsic to the Job | .50 | .40 | .33 | .50 |
| Career Development | .41 | .24 | .21 | .36 |
| Role in the Organization | .44 | .34 | .33 | .48 |

*Correlation Significant at the .05 Level or Less. All Other Correlations Significant at the .01 Level or Less.

Finally, when total organizational categories were compared against total manifestations (see Table VIII), the resultant correlation was .51

which was significant at the .01 level. This indicates that organizational stress accounts for over twenty-five percent of the observed variance in manifestations. The results, therefore, support the P:E Fit notions of French and Caplan and the theoretical framework of Cooper and Marshall.

## Summary and Implications

Teachers in four Buffalo Public Schools were surveyed during June of 1982. Teachers, overall, reported more than average levels of stress, but they did not report the high levels of stress that might have been anticipated, especially for that time of the year (cf., Hembling and Gilliland, 1981).

The survey focused on five organizationally-based categories that are potential sources of stress for teachers. The results show the categories being ranked as follows from highest to lowest sources of stress: career development; organizational structure and climate; relationships; factors intrinsic to the job; and role in the organization. Of the sub-categories analyzed, only one, salary, ranked above the midpoint on the seven-point response scale. Other sub-categories that were ranked relatively high, ranked from highest downward, include lack of group cohesiveness; quantitative work overload; responsibility for people; organizational climate; and role conflict. Ranked as the lowest stressors, from bottom up, were role ambiguity; qualitative work overload; and career progress.

Several organizational factors unique to schools were included in the survey. Results showed that these factors, all of which are of central importance to teachers' core tasks (i.e., classroom activities) were more potent as sources of stress than were general organizational categories.

These factors, in rank order from the highest stressor downward, include concern about insufficient student efforts; lack of necessary materials, equipment and facilities; frustration over discipline problems; and responsibility for students' futures.

Survey results were also analyzed to establish whether the demographic variables of gender, age, experience, educational attainment, and grade-level taught, have effects on felt-stress. ANOVA F tests comparing demographic variables to the survey's substantive questions failed to show a single case of significance at the categorical or sub-category level.

The data were also analyzed to establish whether outcomes varied across school-sites. ANOVA F tests showed no significant variations. In fact, of the thirteen sub-categories, only four showed a mean difference of more than half-a-point on the response scale. These four, ranked from most variation downward, are leader influence, lack of cohesiveness, quantitative work overload, and organizational structure.

Specific elements of greatest stress manifestations were ranked as follows: feeling anxious, physical exhaustion, feeling depressed, becoming fatigued easily, sleeping more, and feeling vulnerable. Comparing manifestation categories, these teachers appear to respond to stress emotionally more than physically or behaviorally. Six of the highest correlations were observed with emotional manifestations. These relationships held constant as sub-categories were collapsed into categories. Most important, clear relationships were revealed between all organizational variables and individual manifestations of stress.

Organizational Implications

Contrary to what might have been expected, the urban teachers surveyed reported only moderately high levels of stress. Equally important, they identified factors unique to education and centering upon the classroom, as those most stressful to them. For these teachers, issues related to the core task of working with students appear to be of greater relevance than are issues that are organizationally-focused and which may be viewed as more peripheral to their activities.

Why did these teachers report lower levels of stress than might be expected? Perhaps teachers are not as stressed as we are being led to believe. On the other hand, it may be that teachers who are exposed to stressful environments for extensive periods of time may become more capable of coping with them or may become numbed to the severe realities of their environments. Further research is needed about this question if we are to develop appropriate stress management strategies.

All that can be said for now about teachers in these four schools is that, as a group, they appear to be only moderately stressed. The results of Kahn, et al.'s (1964), Job Related Tension Index study led that group of researchers to develop a typology contrasting characteristics of high v. low occupational stress groups. When viewed against the template of Kahn's typology (Figure II) the results of the study show responding teachers to be more like workers with low levels of occupational stress than like workers with high levels of occupational stress.

Figure II:
Characteristics of Low and High Levels
of Occupational Stress

| Characteristics of Low Level of Occupational Stress | Characteristics of High Level of Occupational Stress |
|---|---|
| Role Clarity | Role Ambiguity |
| Authority Commensurate with Role Responsibilities | Role Responsibility-Authority Imbalance or Conflict |
| Able to Plan and Moderate Work Load | Extremes of Workload |
| Central Interacting Element in Organization's Information Network | Unable to Obtain Information Necessary to Fulfill Role Responsibilities |
| Ability to Plan Career Goals with Confidence | Job Insecurity and Lack of Ability to Predict Career Future |

(from Kahn, et al., 1964)

Teachers in the study approximated Kahn's first two categories of low level of occupational stress (i.e., role clarity and authority). As to the third, while planning of work was not an issue, the overall quantity of work was viewed as excessive, and stressful. For the fourth, teachers did not feel themselves to be at the center of the information network, but they did perceive that they could obtain the information required to do their jobs. Finally, these teachers, two-thirds of whom have been teaching for more than a decade, did not seem to feel blocked in their careers. They may not

see much room for advancement, but most appear to have made peace with themselves about the future of their professional lives.

Thus, while teaching may not be stress-free for the teachers in the study, it does seem to be relatively manageable. Further, these teachers are able to distinguish between a variety of potential stressors; i.e., they are more effected by classroom-based issues than they are by organizationally-based issues.

Individual Manifestations Implications

Although overall means of both organizationally-based categories and stress manifestations were not particularly high, several important considerations merit discussion. Scores in all cases ranged to the extreme in magnitu Thus there are a minority of individuals who are experiencing high stress and exhibiting high manifestations of this stress. As noted earlier there were observed stress manifestations that imply incipient illness onset. The probability exists that some individual teachers may well be "burned out" or approaching that stage, and/or experiencing clear pathological conditions.

Thus, even if teachers in general are only moderately stressed, school boards and administrators might consider the development of individually-based stress management programs on a selective basis for those teachers who demonstrate high stress manifestations.

In Closing

The Person-Environment Fit concept is a useful way of thinking about teacher stress. In the present study we were able to identify certain environmental factors in the organization that have a direct bearing on the

felt-level of stress for elementary school teachers. We believe, given the high cross-school consistency of factors that correlate with felt-stress, that the findings may be applicable in other settings. Further, we think that the findings support the contention that education leaders can design better stress management programs if they consider P:E Fit; i.e., if they view the school and the classroom as well as the individual teacher as potential sources of felt-stress.

Finally, teachers' reports of high felt-stress being due more to classroom than organization-wide factors make good sense. In this light, the definition of stress by McGrath, noted earlier, is worth repeating here: stress is felt when there is "a perceived excess of environmental demands over an individual's perceived capability to meet them and when failure to meet these demands has important perceived consequences." The third element; i.e., important perceived consequences, offers explanatory power for our findings. What is most important, and thus has "important perceived consequences," for teachers, is their performance in the classroom. If their professional obligations can not be met, their self-image and, consequently, their ability to cope may well be endangered. In short, teachers will experience increasing levels of stress if they believe they can not function effectively in the classroom.

## Epilogue

We are presently working with teachers in three of the four schools (the fourth being a control setting) that were discussed in the paper. We are testing a variety of stress management strategies that are organizationally and individually-based to see if they can have a positive impact on the factors identified by teachers as most stressful. At the end of the present school year we will survey teachers in these schools again to ascertain if our interventions have had a modifying impact on teachers' stress. We plan to report the results of this work in the near future.

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